

REMARKS/ARGUMENTS

Claims 1, 2, 4, 6 and 27 have been amended without prejudice or disclaimer. New dependent claim 29 has been added. Claims 10-26 stand withdrawn, No new matter has been added. Claims 1-9 and 27-28 remain in the application. Applicants respectfully request reconsideration of this application

Claim Rejections:

Claims 1-9 and 27-28 were rejected under 35U.S.C. 103(a) as being unpatentable over Hutchison, IV et al. (6,725,061) in view of Kung (6,718,182).

Applicant has amended the claims to clarify the invention. In the Response to Arguments on page 4, the Examiner stated that the feature “event mapping descriptors are a portion of non-executable *code* stored in the accessory” was not recited in Applicant’s rejected claims. Applicant, respectfully points out, that the argument presented on page 12 of the Amendment Accompanying RCE pertained to the descriptors being a portion of a non-executable *data* stored in the accessory. Applicant has amended the independent claims to recite the word “data” and that this data is in the form of physical configuration and event mapping descriptors.

Each independent claim has been amended to recite “accessory configuration *data*” in the form of “physical configuration and even mapping descriptors” are stored within the accessory. Applicant respectfully asserts that one of ordinary skill in the art will recognize that “accessory configuration data” stored in the embedded memory device, as now recited in the amended claims, is not the equivalent of executable code such as Kung’s “initialization program” or “peripheral driver”. Support for this amendment is found throughout the specification, for example on page 5, lines 7-12 which recites that:

[t]he embedded memory device contains accessory configuration data 124 which provides information to the radio 104 on how to configure external accessory interface 112 and how to operate accessory 102. Accessory configuration data 124 contains exactly one accessory identifier 126, at least one physical configuration descriptor 114 and at least one event mapping descriptor 122. The accessory identifier 126 is used to uniquely identify the type or model of accessory 102.

Additional support is found on page 5, line 23 to page 6, line 4 which describes a physical configuration descriptor, which is clearly a table of data.

The physical configuration descriptor contains the following information about each of the five GPIO lines:
Data direction: input or output;
Logic sense: active high or active low;
Priority (inputs only) high / low (high priority is typically assigned to interrupt).

Additionally, on page 14, line 3 to page 15, line 15 the specification describes examples of event mapping descriptors as a table of data stored in the embedded memory.

Accordingly, the claims as amended are clearly distinguishable over Kung's executable code.

Applicant's invention utilizes a radio-resident microcontroller (106) that accesses accessory configuration data in the form of accessory device descriptors stored in the accessory (102) to configure the accessory and its interface for proper operation. The accessory configuration data is not executable code, but information to configure the radio microcontroller. No radio device driver or executable code is stored in Applicant's memory device (120). New dependent claim 29 has been added to emphasize this aspect,

if needed, by reciting “wherein the memory device having accessory configuration data has no radio device driver or executable code stored therein.”

Claim 4 recites a single wire memory device containing accessory configuration data in the form of event mapping and physical configuration descriptors providing information about the accessory without any microcontroller within the accessory; and upon accessory detection by the radio microcontroller, the radio reads the event mapping and physical configuration descriptors of the single wire memory device and configures the external radio interface in response thereto.

Claim 6 recites a plurality of accessories without microcontrollers each having accessory configuration data in the form of physical configuration descriptors and event mapping descriptors stored therein; and the external radio interface automatically being configured via the radio microcontroller to each external accessory interface based on the physical configuration and event mapping descriptors of each of the plurality of accessories.

All rejections are based on a combination on Hutchison and Kung. Kung teaches an accessory with a memory device that contains executable code. Indeed, all independent claims in Kung include the limitation of having executable programs stored in the accessory. Applicant’s accessory does not contain executable code in the context of the current application. Executable code in the accessory is never used for accessory detection or interface configuration in Applicant’s invention – only accessory configuration data stored in the form of physical configuration and event mapping descriptors is used.

Referring to Figure 2 of Kung, accessory 120 contains peripheral circuit 130 (the “meat” of the accessory”) and memory device 140. Memory 140 contains peripheral driver program 142 and initialization program 144. Kung teaches that 140 “becomes an extension of memory 40 of the cellular telephone” (col. 3, line 41). Applicant’s invention

does not require storing executable code as does Kung with "driver program" 142 and "initialization program" 144.

Furthermore, Kung teaches that initialization program 144 is executed once for device configuration followed by use of driver program 142 which provides functionality to the user interface (col 3, lines 45-60). Applicant's invention has no requirement for interfacing to a user interface program to operate. Column 4, line 65 to col. 5, line 8 states "the primary purpose of the init program 144 is to initialize the peripheral circuit 130 and to integrate the software of the peripheral driver program 142 with the software of the cellular telephone." Applicant's invention has no initialization software stored in accessory 120. Also, Kung teaches that "the initialization program must link with the user interface program 142 (col. 4, lines 3-4). Applicant's invention requires no such linkage.

Another embodiment shown in Figure 4 of Kung and explained in col. 5, lines 39-65, provides a specific example where accessory 120 is a networking accessory, and driver program 142 running on processor 30 provides a menu option on display 14 of phone 10. Pressing the new menu feature will execute functionality in driver program 142 that operates accessory 120 (col. 5, lines 57-65).

Figure 5 of Kung shows another embodiment where accessory 120 does not have peripheral accessory functionality other than operating purely as an external memory device (col. 6, lines 6-16). This embodiment contains an "application data set" 348, however this embodiment still requires the step of executing a program 344 stored in memory 340 of accessory 300. Initialization program 344, which is executable code on accessory 300 and is responsible for initialization/acting upon the application data set 348 (col. 6, lines 40-42). In contrast, Applicant's invention has no initialization program 344, has no application program 342. Applicant's "accessory configuration data" in the form of "physical configuration descriptors" and "event mapping descriptors" are present, and are acted upon by executable code present in the radio 10 and internal memory 40 - not in memory of the accessory. Applicant asserts that the claims as amended reciting "accessory configuration data stored in the form of physical

configuration and event mapping descriptors” are not the equivalent of Kung’s executable code.

Figure 6 is a specific implementation of the embodiment in Figure 5, utilizing application data set 348 and application program 442. It should be noted that the name “application data set” is obviously associated with application program 342, both by name (both begin with “application”) and further supported by the cited example (col. 6, lines 59-63). The Application Data Set 348 in Kung does not control the interface 320, but is merely data within the scope of application program 342, which does not control interface 320. In contrast, Applicant’s invention utilizes accessory configuration data in the form of physical configuration and event mapping descriptors in memory 120 which are used by a driver in radio 104. This driver is generic and not specific to accessory 100, 200, or 300, and when used in connection with the physical configuration and event mapping descriptors configures interface 120/320 for the operation of peripheral functionality.

Applicant respectfully disagrees with the Examiner’s assertion that “initialization program 144 and software driver code 142” are equivalent to “event mapping descriptors” in Applicant’s invention. Event mapping descriptors are part of the accessory configuration data stored in the accessory, and acted upon by driver code always present in the radio. Kung does not teach that application data set 348 is in any way associated with the operation or configuration of port 120/320. Furthermore, Kung does not teach that the application data set is used directly via a program resident in radio 10, but instead teaches application data set 348 is associated with application program 342 which is in Kung’s accessory. In another embodiment, Kung teaches of initialization program 144 to configure the accessory, but program 144 is executable code on accessory 100. In this embodiment, there is no Application Data set or any data set.

None of the cited references taken individually or combined teach or suggest that which is claimed by Applicants’ invention. Accordingly, the independent claims, as amended, are in condition for allowance. Claims 3, 5, 7-9, 28 and 29 are dependent

claims providing further limitations to what are believed to be allowable independent claims and hence are also in condition for allowance.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

The Applicants believe that the subject application, as amended, is in condition for allowance. Such action is earnestly solicited by the Applicants.

In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicant's attorney or agent at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection.

The Commissioner is hereby authorized to charge Deposit Account 502117, Motorola, Inc, with any fees which may be required in the prosecution of this application.

Respectfully submitted,

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